

REMARKS

Claims 1, 2-15, and 17-35 are now pending in the application. Claim 11 is amended. Claims 1, 2, 5-15, 17, 18, 20, 21, 24, 27, 29, and 33-35 stand rejected under 35 U.S.C. 102(b). Applicants acknowledge the Examiner for indicating that claims 4, 19, 22, 23, 25, 26, 28, 30, and 32 contain allowable subject matter. The above amendments and the following remarks are considered by Applicants to overcome each objection and rejection raised by the Examiner and to place the application in condition for allowance. An early Notice of Allowance is therefore requested.

Claims 1, 2, 5-15, 17, 18, 20, 21, 24, 27, 29, and 33-35 stand rejected as being anticipated by Stoffel et al. (U.S. Patent No. 5,880,758). This rejection is traversed and believed overcome in view of the above amendments and the following discussion.

It is respectfully submitted that Stoffel fails to teach or suggest all the features recited in claims 1 and 14. Specifically, Stoffel fails to teach or suggest that the first and second control portions control the first and second ink ejecting portions such that a relationship between the selected one total volume value and the other total volume value changes when a presently selected print mode of the printer corresponds to one of different values of resolution of an image is changed.

Stoffel discloses the black ink having a first droplet volume larger than a second droplet volume of the color ink (See column 2, lines 17-22), for improved edge acuity of a black text (See column 1, lines 60-61) and reduced cost-per-copy of a color page (See column 1, last line to column 2, first line). Stoffel discloses that the first droplet volume of the black ink and the second droplet volume of the color ink are respectively 105pL and 55pL for the print resolution of 300 x 300dpi. (See column 5, lines 16-24, and table from line 33-41). However, for the reasons discussed below, Stoffel does not teach or suggest that the relationship between the first droplet volume of the black ink and the second droplet volume of the color ink changes when the print mode is changed from one mode to another.

Stoffel discloses different first droplet volumes of the black ink for respective different print modes corresponding to respective different values of resolution of the black text, for example, 105pL for a fast print mode corresponding to 300 x 300dpi, and 90pL for a high quality print mode corresponding to 600 x 300dpi (column 5, lines 16-50, in particular, lines 23 and 30). Stoffel teaches that the droplet volume of the black ink can be increased from 90pL for the high quality print mode to 105pL for the fast print mode, by increasing the temperature of a thermal ink-jet print head (See column 5, lines 55-59).

Although Stoffel teaches the high quality print mode in addition to the fast print mode Stoffel does not teach or suggest enhancing the resolution of the color page (from 300 x 300dpi indicated in the table). The reference merely teaches that the high quality print mode is provided “to enhance the edge quality of the text characters”. (See column 5, lines 43-46, as well as column 1, lines 60-61). Thus, Stoffel fails to teach and/or suggest printing the color page (with the color ink) with a selected one of different values of resolution of the image. The reference only teaches printing the black text only, with a selected one of different values of resolution. The reference never teaches a mixed printing operation such that the black dots are adjacent to the color dots, namely, a printing operation “in each first local area of the image in which the black ink dots are adjacent to the ink dots of said color other than black” as recited in independent claims 27, 29 and 31,

Therefore, Stoffel discloses that only the black text is printable in a selected one of different print modes corresponding to respective different values of resolution (300 x 300dpi, 300 x 600dpi, 600 x 600dpi, as indicated in the table in column 6), while the color page is printed with the predetermined resolution (300 x 300dpi corresponding to the fast print mode of the black text). Accordingly, Stoffel fails to teach or suggest the first and second control portions which control the first and second ink ejecting portions such that “a relationship between said selected one total volume value (first value) of the at least one droplet of said black ink and said another total volume value (second value) of the at least one droplet of the ink of said color other than black changes when a presently selected print mode of the color ink-jet printer is changed from one mode to another”, as recited in the claims 1 and 11.

In the illustrated embodiment shown in TABLE 1 on page 30 of the present specification, the total volume value of the black ink is changed from “LARGE” to “SMALL” while the total volume value of the color ink (non-black ink) is changed from “MEDIUM” to “VERY SMALL” when the print mode is changed from DRAFT mode to FINE mode. As pointed out above, Stoffel never teaches or suggest different print modes (different resolution values) for the color ink (color page printing). Accordingly, it is respectfully submitted that Stoffel fails to teach or suggest all the features recited in claims 1, 11 and 14.

With regard to independent claims 27, 29 and 30, Stoffel fails to teach or suggest a first local area as illustrated in Fig. 7, in which the black ink dots are adjacent to the color ink dots. In contrast, Stoffel discloses the black text printing, and color page printing (column 1, lines 61 and 67), but does not disclose a mixed printing with black and color dots adjacent to

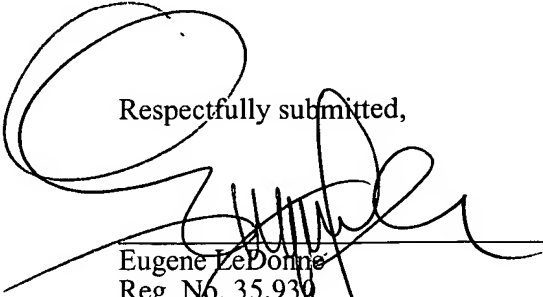
each other. Stoffel fails to teach controlling ink-jet heads such that the relationship between the first droplet volume of the black ink and the second droplet volume of the color ink in the first local area is different from that in a second local area in which the block ink dots are not adjacent to the color ink dots. The reference never teaches different relationships of the first and second droplet volumes corresponding to the different local areas. The reference merely teaches that the first droplet volume of the black ink is larger than the second droplet volume of the color ink. Therefore, it is submitted Stoffel fails to teach or suggest all the features recited in claims 27, 29, and 30.

In view of the above amendments and distinctions, Applicants respectfully request the withdrawal of the rejection of claims 1, 11, 14, 27, 29, and 30 under 35 U.S.C. 102(b).

Claims 2, 2-10, 12, 13, 15, 17, 18, 20, 21, 24, and 33-35 are dependent upon claims 1, 11, 14, 27, 29, and 30. Therefore, it is submitted that these claims recite patentable subject matter for at least the reasons mentioned above. Accordingly, Applicants request the withdrawal of the rejection of claims 2, 2-10, 12, 13, 15, 17, 18, 20, 21, 24, and 33-35 under 35 U.S.C. 102(b).

In view of the above remarks, Applicants submit claims 1, 2, 4, 5-15, and 17-35 recite subject matter that is neither taught nor suggested by the applied references. Thus, for the reasons presented above, claims 1, 2, 4, 5-15, and 17-35 are believed by Applicant to define patentable subject matter and should be passed to issue at the earliest possible time. A Notice of Allowance is requested.

Respectfully submitted,



Eugene LeDonne
Reg. No. 35,930
REED SMITH LLP
599 Lexington Avenue
New York, NY 10022
(P) 212-521-5402
Attorney for Applicant

ELD:BKS